

**To:** Megan Burke[Megan.Burke@respec.com]  
**Cc:** ERT Support[ERTSupport@epa.gov]; Myers, Craig[Myers.Craig@epa.gov]; Way, Steven[way.steven@epa.gov]; Christner, Jan (Jan.Christner@WestonSolutions.com)[Jan.Christner@WestonSolutions.com]  
**From:** Schaefer, Joe  
**Sent:** Tue 10/27/2015 3:50:23 PM  
**Subject:** Re: water quality monitoring system

Craig,

Did you want to have a quick call this week to check in and determine what additional steps you need ERT assistance with?

Joe Schaefer  
Environmental Response Team  
(c) 609-865-8111

On Oct 26, 2015, at 9:53 PM, Megan Burke <Megan.Burke@respec.com> wrote:

Craig, ERT,

Here is the status of the Viper system when I left yesterday (am home now):

Both the conductivity and level sensors where showing up as running in the viper interface. The pH (linc #76) was still not talking. The level looks correct. Jan said that she or Anne will get the conductivity sensor in calibration solution.

Rob has installed a pipe at our stream location to house the sensors. He strung a rope through the pipe so that the wires can be pulled through. I do not think that the pipe is anchored, so it could be pulled out of the stream to pull the wires through and anchor the sensors in the perforated end (zip ties should do it – I believe there are some in the comms truck radio cabinet).

The lincs and battery are located in the hut/office/lab, so they can be worked on out of the elements. The gateway is outside the comes truck but protected.

I will be in the office tomorrow and Wednesday, after that available my cell if you have any

questions.

Best,

Megan

Megan Burke, Ph.D.

Hydrologist

**RESPEC Consulting & Services**

P.O. Box 725, Rapid City, SD 57709-0725

Phone: 605.394.6448

Cell: 605.786.8791

**From:** Megan Burke

**Sent:** Friday, October 23, 2015 3:13 PM

**To:** ERT Support <[ERTSupport@epa.gov](mailto:ERTSupport@epa.gov)>; Myers, Craig <[Myers.Craig@epa.gov](mailto:Myers.Craig@epa.gov)>

**Cc:** Schaefer, Joe <[Schaefer.Joe@epa.gov](mailto:Schaefer.Joe@epa.gov)>; Way, Steven <[way.steven@epa.gov](mailto:way.steven@epa.gov)>; Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))

<[Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com)>

**Subject:** RE: water quality monitoring system

Here is the screenshot as a jpeg.

**From:** Megan Burke

**Sent:** Friday, October 23, 2015 2:42 PM

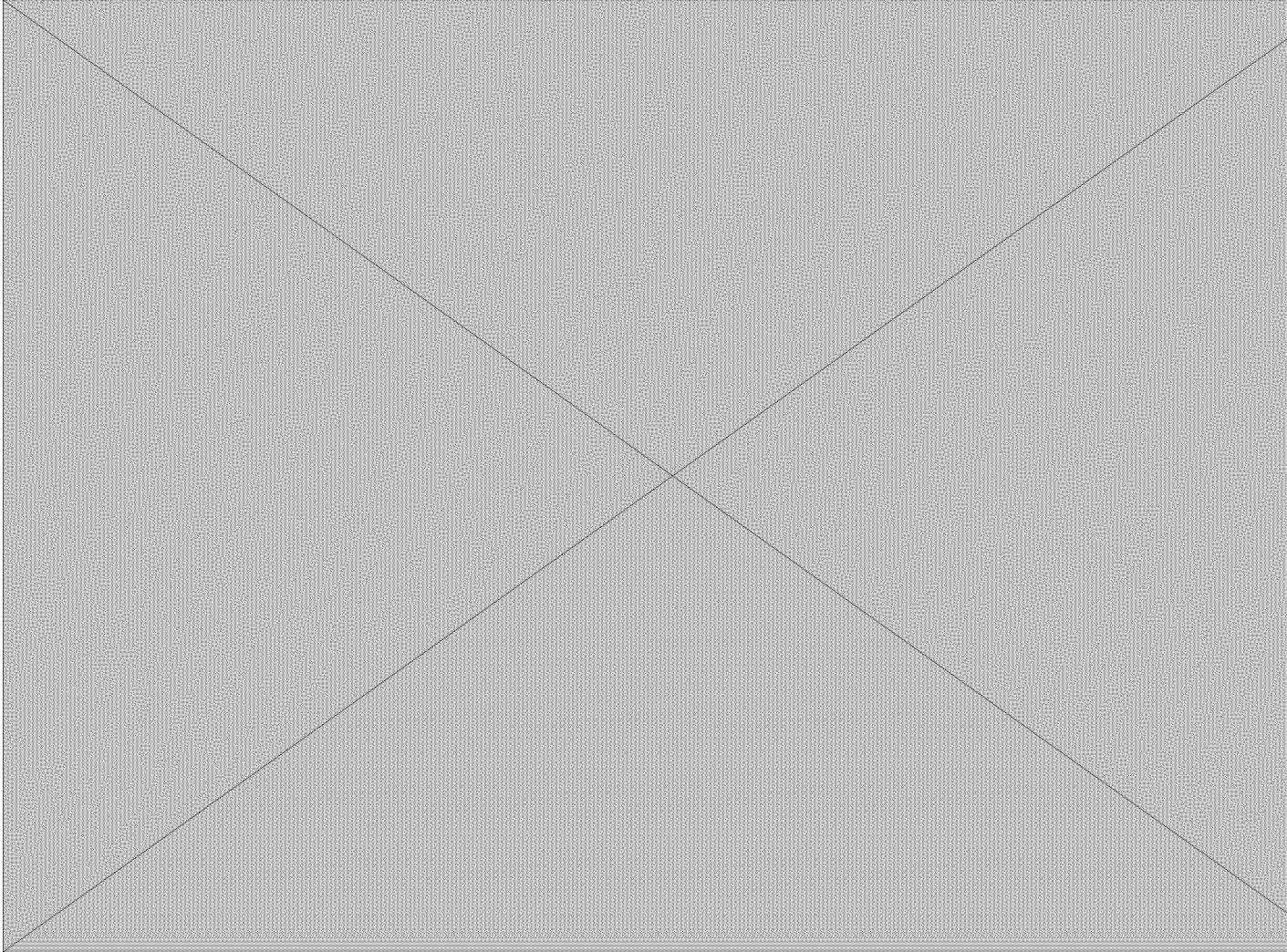
**To:** 'ERT Support'; 'Myers, Craig'

**Cc:** 'Schaefer, Joe'; 'Way, Steven'; 'Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))'

**Subject:** RE: water quality monitoring system

Also, here is a screenshot from the Viper screen (which I'm sure you already see, but it helps w/ my questions). It looks like the runs are stopped... is that why the values are crossed out instead of giving me readings? I would like to try to calibrate meters over the

weekend or at least know what they are reading relative to known values.



**From:** Megan Burke  
**Sent:** Friday, October 23, 2015 2:30 PM  
**To:** 'ERT Support'; Myers, Craig  
**Cc:** Schaefer, Joe; Way, Steven; Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))  
**Subject:** RE: water quality monitoring system

I just double checked. The probe is getting power – checked w/ multimeter. I'm sending a picture of the wiring – same configuration as before.

**From:** ERT Support [<mailto:ERTSupport@epa.gov>]  
**Sent:** Friday, October 23, 2015 2:18 PM  
**To:** Megan Burke; Myers, Craig  
**Cc:** Schaefer, Joe; Way, Steven; Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))  
**Subject:** Re: water quality monitoring system

We were able to verify on our end that network connectivity to all the ports on the linc are working properly. The linc is OK.

Can you double-check the wiring on the probe?

For Additional Information Please Contact

ERT Software Support

1-800-999-6990

1-732-321-6724 (fax)

[ertsupport@epa.gov](mailto:ertsupport@epa.gov)

[www.ertsupport.org](http://www.ertsupport.org)

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**From:** Megan Burke <[Megan.Burke@respec.com](mailto:Megan.Burke@respec.com)>  
**Sent:** Friday, October 23, 2015 3:58 PM  
**To:** ERT Support; Myers, Craig  
**Cc:** Schaefer, Joe; Way, Steven; Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))  
**Subject:** RE: water quality monitoring system

This probe was working. It was getting data & communicating. I don't about the linc – it was one of the spare's in the box. It is getting power & wifi.

I'm on other line - will call in 5 min.

**From:** ERT Support [<mailto:ERTSupport@epa.gov>]

**Sent:** Friday, October 23, 2015 1:54 PM

**To:** Megan Burke; Myers, Craig

**Cc:** Schaefer, Joe; Way, Steven; Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))

**Subject:** Re: water quality monitoring system

Hi Megan,

Did you ever get that probe to work before? or that linc? We're also going to take a look at the meterapp and the log to see if we can see anything there.

We tried to call you, but no answer.

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[www.ertsupport.org](http://www.ertsupport.org)

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**From:** Megan Burke <[Megan.Burke@respec.com](mailto:Megan.Burke@respec.com)>  
**Sent:** Friday, October 23, 2015 12:12 PM  
**To:** ERT Support; Myers, Craig  
**Cc:** Schaefer, Joe; Way, Steven; Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))  
**Subject:** RE: water quality monitoring system

Thanks – logging onto remote server now. I'll take a look at Linc 76 – maybe I have bad connection somewhere. I'll call in ~30 min.

Best,

Megan

**From:** ERT Support [<mailto:ERTSupport@epa.gov>]  
**Sent:** Friday, October 23, 2015 10:08 AM  
**To:** Megan Burke; Myers, Craig  
**Cc:** Schaefer, Joe; Way, Steven; Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))  
**Subject:** Re: water quality monitoring system

Megan,

The run has been reconfigured with the correct links. Please take a look in Deployment Manager. BTW... Linc 76 is not getting any readings.

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[ertsupport@epa.gov](mailto:ertsupport@epa.gov)

[www.ertsupport.org](http://www.ertsupport.org)

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**From:** Megan Burke <[Megan.Burke@respec.com](mailto:Megan.Burke@respec.com)>  
**Sent:** Friday, October 23, 2015 11:32 AM  
**To:** Myers, Craig  
**Cc:** ERT Support; Schaefer, Joe; Way, Steven; Christner, Jan  
([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))  
**Subject:** RE: water quality monitoring system

Thanks Craig!

I had a bad connection the gateway. It is fixed now. All of the lincs are getting a signal. It looks like the lincs have to be reconfigured, b/c I switched them out.

#80 conductivity (sorry – I told you #85, it is actually #80)

#76 pH

#89 flow/level. This one is communicating!

I spoke with Eric Lancaster about tying into their system. It sounds a bit complicated. Everything is working through the comms truck right now, so let's stick with it. If we decide to move to Alexco's system, I think it would be better if Eric or one of his staff communicate directly w/ Craig & ERT.

Best,

Megan

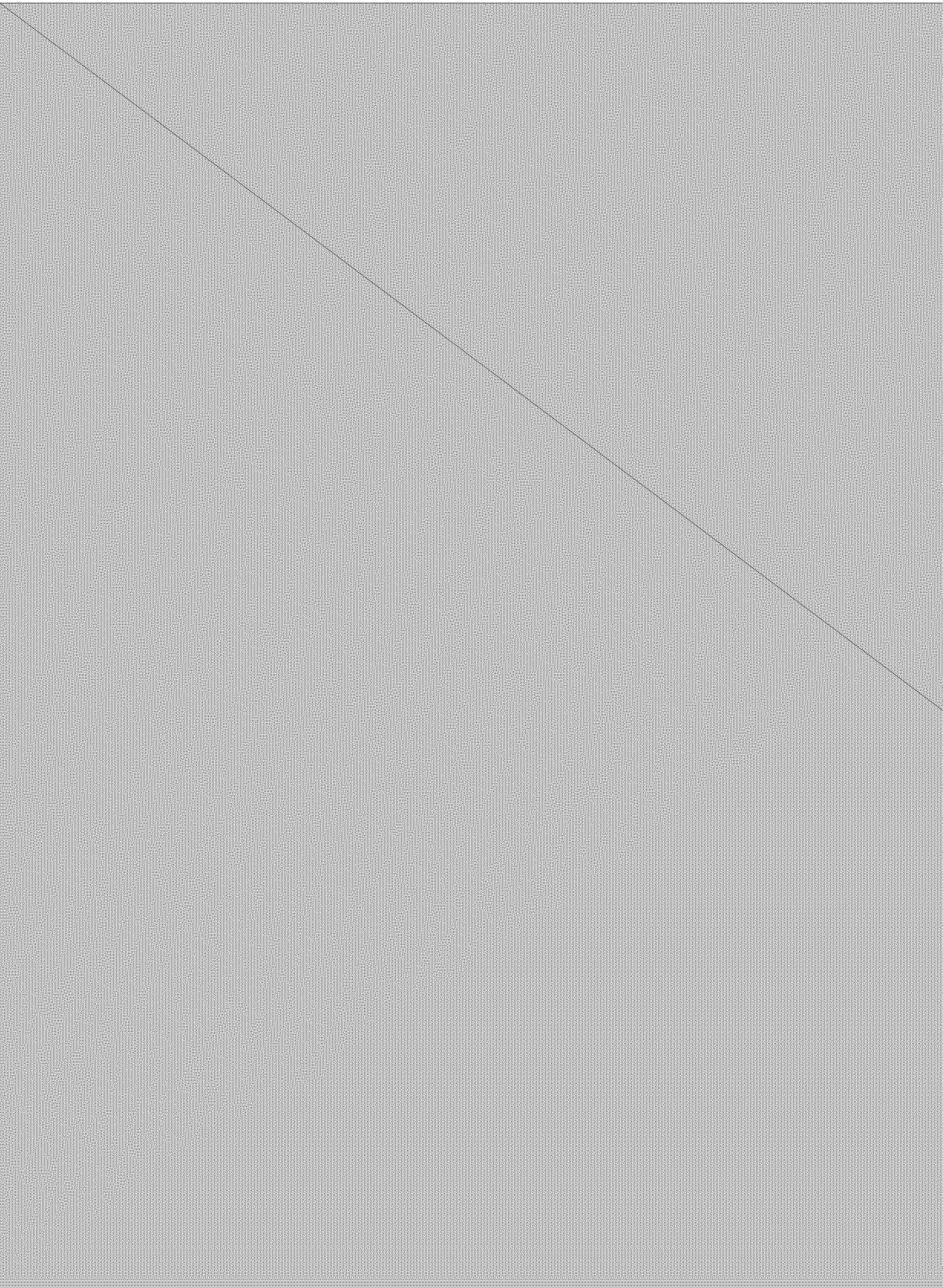
**From:** Myers, Craig [<mailto:Myers.Craig@epa.gov>]  
**Sent:** Friday, October 23, 2015 8:41 AM

**To:** Megan Burke  
**Cc:** ERT Support; Schaefer, Joe; Way, Steven; Christner, Jan  
([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))  
**Subject:** Re: water quality monitoring system

If you try to hook into Alexcos system: move the small switch that's just sitting on the top shelf of the Comms truck rack to Alexco along with the gateway.

I think I can come down next week for a day to help get everything moved and set up. Let me do some checking.





Sent from my iPhone

On Oct 23, 2015, at 8:07 AM, Megan Burke <[Megan.Burke@respec.com](mailto:Megan.Burke@respec.com)> wrote:

Ah, I take that back – only the power light is on. The cell & mesh are not. The ERT wireless network is not showing up.

**From:** Myers, Craig [<mailto:Myers.Craig@epa.gov>]  
**Sent:** Friday, October 23, 2015 7:59 AM  
**To:** Megan Burke; ERT Support; Schaefer, Joe  
**Cc:** Way, Steven; Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))  
**Subject:** RE: water quality monitoring system

Connect your computer or phone or something to the ERT wireless network and make sure you can hit Google. I'd also check the wired connection into the gateway and make sure it's secure.

**From:** Megan Burke [<mailto:Megan.Burke@respec.com>]  
**Sent:** Friday, October 23, 2015 7:44 AM  
**To:** Myers, Craig; ERT Support; Schaefer, Joe  
**Cc:** Way, Steven; Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))  
**Subject:** RE: water quality monitoring system

It is where you left it. All of the lights are on.

**From:** Myers, Craig [<mailto:Myers.Craig@epa.gov>]  
**Sent:** Friday, October 23, 2015 7:29 AM  
**To:** ERT Support; Megan Burke; Schaefer, Joe  
**Cc:** Way, Steven; Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))  
**Subject:** RE: water quality monitoring system

Is the gateway where I left it, or has it been moved around?

**From:** ERT Support  
**Sent:** Friday, October 23, 2015 5:22 AM  
**To:** Megan Burke; Schaefer, Joe; Myers, Craig

**Cc:** Way, Steven; Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))  
**Subject:** Re: water quality monitoring system

Thanks for the update Megan. Stay warm and let us know if/when we can help.

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[ertsupport@epa.gov](mailto:ertsupport@epa.gov)

[www.ertsupport.org](http://www.ertsupport.org)

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**From:** Megan Burke <[Megan.Burke@respec.com](mailto:Megan.Burke@respec.com)>  
**Sent:** Thursday, October 22, 2015 7:50 PM  
**To:** Schaefer, Joe; Myers, Craig; ERT Support  
**Cc:** Way, Steven; Christner, Jan ([Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com))  
**Subject:** RE: water quality monitoring system

All of the lincs are getting power. This was actually quite an undertaking - #s 79, 85, and 83 will not stay on. I had to replace lincs # 83 and 79.

All 3 will get, but not hold a wifi signal... at least not yet. I am working inside the hut about 10' away from the receiver. I tried bringing the lincs out on the porch, same issue. It is currently snowing pretty good right now. I will bring them back outside tomorrow & try again – the equipment is staying inside tonight due to weather. This does raise concern for performance when the lincs are stationed ~200' away and sheltered.

Here are the linc #s for each sensor:

#85 conductivity

#76 pH

#89 flow (Level)

-Megan

**From:** Megan Burke  
**Sent:** Tuesday, October 20, 2015 5:40 PM  
**To:** 'Schaefer, Joe'; 'Myers, Craig'; 'ERT Support'  
**Cc:** 'Way, Steven'  
**Subject:** RE: water quality monitoring system

I am leaving the battery unhooked tonight. Here is where we stand:

#85 is all set

#83 was doing great, but power would not stay on this afternoon. I've shuffled the links about today. Confident I can fix tomorrow.

#79 got wet. I will trade the link for #76.

We are in for a good snowstorm. I have sheltered all of the links & batteries.

I think I can get this all squared away tomorrow. I will call ERT if I have any problems.

Best,

Megan

605-786-8791

**From:** Megan Burke  
**Sent:** Tuesday, October 20, 2015 3:44 PM  
**To:** 'Schaefer, Joe'; Myers, Craig; ERT Support  
**Cc:** Way, Steven  
**Subject:** RE: water quality monitoring system

Joe,

Great - I saw that #80 was communicating.

I have the power off right now, b/c I've been working with #79.

I wanted to see if some of the wires got pulled when I moved the boxes around... it looks like #79 got water inside. That has to be our problem. I have moved everything to a more protected location so this will not happen again

I see that there are other links in the kit. I will switch #79 out for #76.

Megan

**From:** Schaefer, Joe [<mailto:Schaefer.Joe@epa.gov>]  
**Sent:** Tuesday, October 20, 2015 12:58 PM  
**To:** Megan Burke; Myers, Craig; ERT Support  
**Cc:** Way, Steven  
**Subject:** RE: water quality monitoring system

Megan,

I swapped 85 out for 80 in the run.

Joe Schaefer

Environmental Response Team

US EPA

(c)609-865-8111

**From:** Megan Burke [<mailto:Megan.Burke@respec.com>]  
**Sent:** Tuesday, October 20, 2015 1:52 PM  
**To:** Schaefer, Joe <[Schaefer.Joe@epa.gov](mailto:Schaefer.Joe@epa.gov)>; Myers, Craig <[Myers.Craig@epa.gov](mailto:Myers.Craig@epa.gov)>;  
ERT Support <[ERTSupport@epa.gov](mailto:ERTSupport@epa.gov)>  
**Cc:** Way, Steven <[way.steven@epa.gov](mailto:way.steven@epa.gov)>  
**Subject:** RE: water quality monitoring system

I moved the links out of the box/shelter this morning to take a look:

#83 seemed to working fine.

#80 was getting power and a signal, but it was not transmitting data. Also, it looks to be listed at #85 in the Viper interface.

#79 was not getting power. I will see what I can do about that.

When it started snowing hard, I put them back in the shelter. At that point, it looked like the signals dropped from the Viper interface. We were on a lightening hold for a while and when I came back out to check on them, all of the links were off. I turned #83 back on. #s 79 & 80 did not turn back on. I will check the wiring and battery for those two units.

**From:** Schaefer, Joe [<mailto:Schaefer.Joe@epa.gov>]  
**Sent:** Tuesday, October 20, 2015 8:05 AM  
**To:** Myers, Craig; ERT Support  
**Cc:** Megan Burke; Way, Steven

**Subject:** RE: water quality monitoring system

Okay we have the run configured correctly now. We are down to getting data from just one of the three but once the other two come on-line they should have the correct units. I would just do a spot check to make the numbers (and our math) looks like it makes sense.

We created a new Gold King Mine VIPER deployment that is associated with the GKM Operations EPAOSC site. Everyone that has explicit view private rights (view private or view exclusive box is checked on their name in the contacts section) will be able to see the GKM Viper deployment.

I'm in the office this week and next and relatively free.

Joe Schaefer

Environmental Response Team

US EPA

(c)609-865-8111

**From:** Myers, Craig  
**Sent:** Tuesday, October 20, 2015 9:13 AM  
**To:** ERT Support  
**Cc:** Megan Burke; Schaefer, Joe; Way, Steven  
**Subject:** Re: water quality monitoring system

Once you get things stable and displaying correctly, I'd like to coordinate a stop and restart of a run with the satellite provider watching the data usage to see what volume of data we'll use - the satellite system I plan to use over the winter is provided by the water treatment contractor and has a 20 GB monthly limit - they're doing telemetry on their system, so we'll need to see what the aggregate usage will be between the two.

Joe, we'd also like to get you in touch with them to see what of their data can be displayed on Viper as well, and make the Viper deployment the dashboard for the site (adit with the In-Situ system, treatment plant status, and stream monitors below treatment). What's your availability this week?

Thanks all!

Craig

Sent from my iPhone

On Oct 20, 2015, at 6:56 AM, ERT Support <[ERTSupport@epa.gov](mailto:ERTSupport@epa.gov)> wrote:

Hi Guys,

It appears that the Run has been Paused which is why we haven't seen the data. Two of the instruments are up and running (Linc 80 and 83) and I have restarted the Run.

Let me talk to Joe and see what he wants to do next and I'll be in touch.

Thanks,

Melissa

For Additional Information Please Contact

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1-732-321-6724 (fax)

[ertsupport@epa.gov](mailto:ertsupport@epa.gov)



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**From:** Megan Burke <[Megan.Burke@respec.com](mailto:Megan.Burke@respec.com)>  
**Sent:** Tuesday, October 20, 2015 8:31 AM  
**To:** Schaefer, Joe; Myers, Craig  
**Cc:** ERT Support; Way, Steven  
**Subject:** RE: water quality monitoring system

Craig,

The links are hooked up to the battery that is charging on the generator. The only time that we have disturbed them was last Thursday to change out batteries, so I would guess that it is connectivity rather than power.

I can try to troubleshoot this today. It would help to have some instructions.

Best,

Megan

**From:** Schaefer, Joe [<mailto:Schaefer.Joe@epa.gov>]  
**Sent:** Monday, October 19, 2015 4:28 PM  
**To:** Myers, Craig <[Myers.Craig@epa.gov](mailto:Myers.Craig@epa.gov)>  
**Cc:** ERT Support <[ERTSupport@epa.gov](mailto:ERTSupport@epa.gov)>; Way, Steven <[way.steven@epa.gov](mailto:way.steven@epa.gov)>; Megan Burke <[Megan.Burke@respec.com](mailto:Megan.Burke@respec.com)>  
**Subject:** Re: water quality monitoring system

Craig,

We haven't seen any data come through since last Monday. So I don't know if things look like they are running and it's just a connectivity issue or if it's power.

Once the connection is re-established we can walk Megan through what needs to be done in survey controller to show the instruments as water quality sensors with the appropriate values and units.

Joe Schaefer

Environmental Response Team

(c) 609-865-8111

On Oct 19, 2015, at 5:30 PM, Myers, Craig <[Myers.Craig@epa.gov](mailto:Myers.Craig@epa.gov)> wrote:

Joe et al,

Megan is awaiting guidance on what needs to happen to get the data coming from the units on site to translate into meaningful water quality measurements. Please provide her guidance on what she needs to do. When I left, the instruments were sending data to the servers, though they were registering as SPMs.

Thanks,

Craig Myers

Federal On-Scene Coordinator

U.S. EPA Region 8 Emergency Response Unit

1595 Wynkoop St

Denver, CO 80202

Phone: 303.312.7067

Cell: 303.808.1738

email: [myers.craig@epa.gov](mailto:myers.craig@epa.gov)

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